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EXAMINER

YUEN, KAN

ART UNIT

PAPER NUMBER

2616

NOTIFICATION DATE

DELIVERY MODE

07/02/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/654,161

Applicant(s)

LIU ET AL.

Examiner

Kan Yuen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Detailed Action

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is considered vague and indefinite, because of the term "may be". It's not known to whether to include the limitation after the term "may be". Similar problem exist in claim 2.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-8, 11-14, 16-19, 22-27, 29-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Minshall (Pat No.: 6987774).

In claim 1, Minshall disclosed the method of at a first level, placing messages of a traffic type based on a specified criteria for the traffic type onto a message queue for the traffic type, wherein there may be multiple traffic types (see fig. 2, and see column 2, lines 4-20). As shown, a set of traffics is stored into different group of queues. Each queue has different type of data; selecting a message from a message queue based on a priority assigned to each traffic type (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206; providing the selected message to an interface; at a second level, reading the selected message from the interface (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Queue schedulers 205, 207 and 209 represents the second level; placing the read message into one of a plurality of priority queues (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 represents each priority queues; and selecting a message from one of the priority queues for transmission when a transmit opportunity is available (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206.) The scheduler 203, at the second level, selects a group queue scheduler from a plurality of schedulers 205, 207, and 209.

Regarding to claim 2, Minshall also disclosed the method of for each traffic type, there may be multiple message streams, and wherein messages from different message streams of each traffic type is placed in the message queue (see fig. 2, and

see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority.

Regarding to claim 4, Minshall also disclosed the method of messages from different message streams are placed in the queue based on a weighing of the different message streams (see fig. 5, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority (weighting).

Regarding to claim 5, Minshall also disclosed the method of the message selected in the first selecting is the message at a head of a message queue for a traffic type with the highest priority (see fig. 5, and see column 3, lines 5-25), wherein the reference, the highest priority group is selected.

Regarding to claim 6, Minshall also disclosed the method of the message selected in the second selecting is the message at a head of a message queue for a traffic type with the highest priority that has a granted transmission opportunity (see fig. 2, and see column 2, lines 4-20), wherein the reference, the highest priority group is selected by the second level scheduler 203.

Regarding to claim 7, Minshall also disclosed the method of the interface is a shared memory, and wherein the providing comprises writing the selected message to the shared memory (see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and

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generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding to claim 8, Minshall also disclosed the method of the reading comprises retrieving the selected message from the shared memory (see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 selects a message from shared schedulers 205, 207 and 209.

Regarding to claim 11, Minshall also disclosed the method of the transmit opportunity has multiple periods, and wherein in a first period, only the highest priority messages can be transmitted (see column 3, lines 54-65). As shown, the queue with greater value has the priority to transmit first, as well as with clock value less than others. Therefore, we can interpreted that it transmits first.

Regarding to claim 12, Minshall also disclosed the method of in a second period, any priority message can be transmitted (see column 3, lines 54-65). The next (second) higher clock value queue is transmitted. The system also takes priority of lower value queue to be transmitted first. Therefore, the next (second) higher clock value queue can be any priority queue being transmitted.

Regarding to claim 13, Minshall also disclosed the method of a message of a given priority can be selected only if there are no messages of a higher priority waiting

to be transmitted (see column 3, lines 5-25). A next queue is selected if the higher priority queue does not have data to transmit.

Regarding to claim 14, Minshall also disclosed the method of a message of a given priority can be selected only if there are no transmission opportunities for messages of a higher priority (see column 3, lines 5-25). A next queue is selected if the higher priority queue does not have data to transmit. Therefore we can interpret that no data is same as no transmission opportunities.

Regarding to claim 16, Minshall also disclosed the method of the placing comprises putting the message into a priority queue assigned to enqueue messages of the same assigned priority (see fig. 2, and see column 2, lines 4-20). As shown, a set of traffics is stored into different group of queues. Each queue has different type of data.

Regarding to claim 17, Minshall also disclosed the method of the second selecting comprises choosing a message with an assigned priority level equal to that permitted in the transmission opportunity (see fig. 2, and see column 2, lines 4-20). At second selecting, the scheduler 203 selects the highest priority queue.

Regarding to claim 18, Minshall also disclosed the method of the second selecting further comprises choosing a message with a transmit time shorter than the transmission opportunity. (see fig. 2, and see column 2, lines 4-20, and see column 3, lines 50-67). At second selecting, the scheduler 203 selects the highest priority queue, with less clock value.

Regarding to claim 19, Minshall also disclosed the method of a plurality of traffic queues, each traffic queue containing a plurality of message queues and a queue

scheduler, wherein a traffic queue enqueues messages of a single traffic type, wherein each message queue is used to store messages from a single message flow and the queue scheduler orders the messages in the message queues according to a first scheduling algorithm (see fig. 2, and see column 2, lines 4-20). As shown, a set of traffics is stored into different group of queues. Each queue has different type of data; a first scheduler coupled to each traffic queue, the first priority scheduler containing circuitry to select a message from one of the traffic queues based upon a first serving algorithm (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206 based on priority value (first serving algorithm); a plurality of priority queues coupled to the first scheduler, wherein each priority queue is used to store messages selected by the first scheduler according to a message's assigned priority level (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 represents each priority queues; and a second scheduler coupled to each priority queue, the second scheduler containing circuitry to select a message from one of the priority queues according to a second serving algorithm (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206.) The scheduler 203, at the second level, selects a group queue scheduler from a plurality of schedulers 205, 207, and 209 based on clock value (second serving algorithm).

Regarding to claim 22, Minshall also disclosed the method of the first serving algorithm selects the message based upon a priority level assigned to each traffic

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queue (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206 based on priority value (priority level).

Regarding to claim 23, Minshall also disclosed the method of the first serving algorithm selects the message based upon information regarding remaining bandwidth allocated for each traffic type (see column 3, lines 65-67, and see column 4, lines 1-10). The scheduler also guarantees bandwidth traffic, which we can interpret that scheduler selects based on bandwidth or remaining bandwidth.

Regarding to claim 24, Minshall also disclosed the method of information about the selected message is used to adjust the information about the remaining bandwidth allocation (see column 3, lines 65-67, and see column 4, lines 1-10). Once the highest priority queue is selected, the next queue with selected based on the previous bandwidth allocation.

Regarding to claim 25, Minshall also disclosed the method of an interface between the first scheduler and the plurality of priority of queues, the interface to allow the exchange of information between the first scheduler and the plurality of priority queues (see fig. 2, and see column 2, lines 4-20 and see column 4, lines 1-10). As shown, the first scheduler shares or exchanges information with the priority queues 205, 207, and 209.

Regarding to claim 26, Minshall also disclosed the method of the interface is a shared memory (see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207,

and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding to claim 27, Minshall also disclosed the method of a priority queue can enqueue message from different message flows with equal assigned priority levels (see column 3, lines 50-67). The scheduler selects the priority group based on the priority values.

Regarding to claim 29, Minshall also disclosed the method of the second serving algorithm selects the message based upon an assigned priority level (see fig. 5, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority (priority level).

Regarding to claim 30, Minshall also disclosed the method of the second serving algorithm selects the message based upon information about which message priority can be transmitted (see fig. 5, and see column 3, lines 5-25). As shown in the drawing, each queue represents different class of data, which can be arranged from high to low priority (priority level).

Regarding to claim 31, Minshall also disclosed the method of the second serving algorithm selects the message if there is sufficient time to transmit the message (see column 3, lines 50-67). The scheduler selects queuing groups based on the clock value.

Regarding to claim 32, Minshall also disclosed the method of information about the selected message is used to adjust the information about remaining time to transmit messages (see column 3, lines 65-67, and see column 4, lines 1-10). Once the highest

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priority queue is selected, the next queue with selected based on the previous bandwidth allocation.

Regarding to claim 33, Minshall also disclosed the method of information about the selected message is used to adjust the information about the message priority that can be transmitted (see column 3, lines 65-67, and see column 4, lines 1-10). Once the highest priority queue is selected, the next queue with selected based on the previous bandwidth allocation.

Regarding to claim 34, Minshall also disclosed the method of messages selected by the second scheduler are provided to a transmitter to transmit to the messages' intended destination (see fig. 1 and 2, and see column 2, lines 4-20). As shown, a set of traffics is stored into different group of queues. Each queue has different type of data. After the selection of priority group for transmission, the groups are being transmission by using link107 in fig. 1 to its destination.

Regarding to claim 35, Minshall also disclosed the method of a plurality of traffic queues, each traffic queue containing a plurality of message queues and a queue scheduler, wherein a traffic queue enqueues messages of a single traffic type, wherein each message queue is used to store messages from a single message flow and the queue scheduler orders the messages in the message queues according to a first scheduling algorithm (see fig. 2, and see column 2, lines 4-20). As shown, a set of traffics is stored into different group of queues. Each queue has different type of data; a first scheduler coupled to each traffic queue, the first priority scheduler containing circuitry to select a message from one of the traffic queues based upon a first serving

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algorithm (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206 based on priority value (first serving algorithm); a station coupled to the host, the station to permit communications between the host and other devices, the station comprising a plurality of priority queues coupled to the first scheduler, wherein each priority queue is used to store messages selected by the first scheduler according to a message's assigned priority level (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 represents each priority queues; and a second scheduler coupled to each priority queue, the second scheduler containing circuitry to select a message from one of the priority queues according to a second serving algorithm (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206.) The scheduler 203, at the second level, selects a group queue scheduler from a plurality of schedulers 205, 207, and 209 based on clock value (second serving algorithm).

Regarding to claim 36, Minshall also disclosed the method of an interface between the host and the station, the interface to permit an exchange of messages (see fig. 2, and see column 2, lines 4-20 and see column 4, lines 1-10). As shown, the first scheduler shares or exchanges information with the priority queues 205, 207, and 209.

Regarding to claim 37, Minshall also disclosed the method of the interface is a shared memory (see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207,

and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding to claim 38, Minshall also disclosed the method of the plurality of traffic queues is implemented in a memory in the host and the first scheduler is executing in processor in the host (see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). The queuing groups 202, 204, and 206 are forwarded to the interfaces 205, 207, and 209. A packet scheduler combines features of priority-based scheduler and generalized processor sharing schedulers. Therefore, the scheduler 203 write a message from shared schedulers 205, 207 and 209.

Regarding to claim 39, Minshall also disclosed the method of the plurality of priority queues is implemented in a firmware of the station and the second scheduler is executing in the firmware of the station (see fig. 2, and see column 3, lines 65-67, and see column 4, lines 1-25). As shown, the line card can be implemented with a software functions as described in the reference.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 20, 21, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minshall (Pat No.: 6987774), in view of Gemar (Pat No.: 6414963).

For claim 3, Minshall disclosed all the subject matter of the claimed invention with the exception of messages from different message streams are placed in the queue in a first-come first-served (FIFO) order. Gemar from the same or similar fields of endeavor teaches the method of messages from different message streams are placed in the queue in a first-come first-served (FIFO) order (see column 2, lines 59-67). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the

invention to use the method as taught by Gemar in the network of Minshall. The motivation for using the method as taught by Gemar in the network of Minshall being that it provides data selection based on in most early arrived arrangement.

Regarding to claim 20, Gemar also disclosed the method of the first scheduling algorithm enqueues messages based on their arrival time (see column 2, lines 59-67).

Regarding to claim 21, Minshall also disclosed the method of the first scheduling algorithm also enqueues messages based on a weighting value assigned to each message flow (see fig. 2 box 205, 207, and 209, and see column 2, lines 4-20). Each queue scheduler 205, 207, and 209 selects a queue from each of the group queues 202, 204 and 206 based on priority value (weighting value).

Regarding to claim 28, Gemar also disclosed the method of a priority queue enqueues messages based on their arrival time (see column 2, lines 59-67). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Gemar in the network of Minshall. The motivation for using the method as taught by Gemar in the network of Minshall being that it provides data selection based on in most early arrived arrangement.

9. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minshall (Pat No.: 6987774), in view of Kramer et al. (Pat No.: 7116680).

For claim 9, Minshall disclosed all the subject matter of the claimed invention with the exception of the interface is a shared memory, and wherein the providing comprises

writing a reference pointer to the selected message to the shared memory. Kramer et al. from the same or similar fields of endeavor teaches the method of the interface is a shared memory, and wherein the providing comprises writing a reference pointer to the selected message to the shared memory (see column 2, lines 46-56). As shown, the data is classified as reference in the memory. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kramer et al. in the network of Minshall. The motivation for using the method as taught by Kramer et al. in the network of Minshall being that it provides a convenient way to identify data with header or marker corresponding to its identities.

Regarding to claim 10, Kramer et al. also disclosed the method of the reading comprises retrieving the reference pointer and retrieving the selected message stored at a memory location indicated by the reference pointer (see column 2, lines 46-56). As shown, the data is classified as reference in the memory. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kramer et al. in the network of Minshall. The motivation for using the method as taught by Kramer et al. in the network of Minshall being that it provides a convenient way to identify data with header or marker corresponding to its identities.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minshall (Pat No.: 6987774), in view of Einstein et al. (Pub No.: 2003/0189897).

For claim 15, Minshall disclosed all the subject matter of the claimed invention with the exception of a message of a given priority can be selected only if there is insufficient time in the transmission opportunity for messages of higher priorities. Einstein et al. from the same or similar fields of endeavor teaches the method of a message of a given priority can be selected only if there is insufficient time in the transmission opportunity for messages of higher priorities (see paragraph 0025, lines 1-10). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Einstein et al. in the network of Minshall. The motivation for using the method as taught by Einstein et al. in the network of Minshall being that by setting a timer in the scheduling system will provides a faster result in transmission.

11. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minshall (Pat No.: 6987774), in view of Del Prado Pavon et al. (Pub No.: 2004/0047351).

For claim 40, Minshall disclosed all the subject matter of the claimed invention with the exception of the station is a wireless network adapter. Del Prado Pavon et al. from the same or similar fields of endeavor teaches the method of the station is a wireless network adapter (see paragraph 0046, lines 1-12, see paragraph 0048, lines 1-10). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Del Prado Pavon et al. in the network of Minshall. The motivation for using the method as taught by Del Prado Pavon

et al. in the network of Minshall being that the scheduling can be perform in a hybrid mode (wired and wireless environment).

Regarding to claim 41, Del Prado Pavon et al. also disclosed the method of the wireless network adapter is IEEE 802.11e compliant (see paragraph 0046, lines 1-12, see paragraph 0048, lines 1-10).

Regarding to claim 42, Del Prado Pavon et al. also disclosed the method of the station is a wired network adapter (see paragraph 0046, lines 1-12, see paragraph 0048, lines 1-10). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Del Prado Pavon et al. in the network of Minshall. The motivation for using the method as taught by Del Prado Pavon et al. in the network of Minshall being that the scheduling can be perform in a hybrid mode (wired and wireless environment).

Conclusion

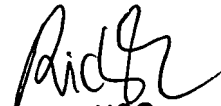
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ornes et al. (Pub No.: 2002/0176428), Charny et al. (Pat No.: 6072772), and Snyder II et al. (Pat No.: 6888830), are show systems which considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kan Yuen whose telephone number is 571-270-2413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ky


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER